CP Python®

CONTINUOUS PACK AUTOMATED SIDE LOADER



Operator's Manual



IF INCORRECTLY USED, THIS EQUIPMENT CAN CAUSE SEVERE INJURY, THOSE WHO USE AND MAINTAIN THE EQUIPMENT SHOULD BE TRAINED IN ITS PROPER USE, WARNED OF ITS DANGERS, AND SHOULD READ AND FULLY UNDERSTAND THE ENTIRE MANUAL BEFORE ATTEMPTING TO SET UP, OPERATE, ADJUST OR SERVICE THE EQUIPMENT. KEEP THIS MANUAL FOR FUTURE REFERENCE.

IMPORTANT SAFETY NOTICE

Proper service and repair are important to the safe, reliable operation of the Heil Co.'s products. Service procedures recommended by Heil are described in this service manual and are effective for performing service operations. Some of these service operations may require the use of tools or blocking devices specially designed for the purpose. Special tools should be used when and as recommended. It is important to note that some warnings against the use of specific methods that can damage the product or render it unsafe are stated in the service manual. It is also important to understand these warnings are not exhaustive. Heil could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Heil has not undertaken any such broad evaluations. Accordingly, anyone who uses service procedures or tools which are not recommended by Heil must first satisfy himself thoroughly that neither his safety nor the product safety will be jeopardized by the method he selects.

The Heil Co., as manufacturer of this equipment that is covered by this manual, is providing a product to the user who has acknowledged to have superior knowledge of the conditions of the use to which the product will be put. The Heil Co. relies upon the user's superior knowledge in specifying any changes or modifications including, but not limited to, the inclusion or noninclusion of options that are required by the user and the Heil product, and for the particular application of the user relative to the Heil product.

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TO THE OWNER

This manual is designed to help ensure safe and efficient operation of the HEIL CP Python refuse collection vehicle.

The manual will familiarize you with the unit, and give operating procedures and tips.

For truck operation and maintenance instructions, see Truck Owner's Manual.

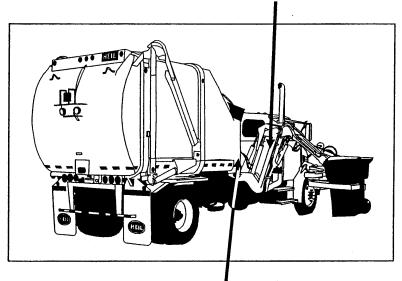
We at HEIL take pride in the units we manufacture. We trust you will be well satisfied with your purchase. Properly operated and maintained, the CP Python should give years of low-cost, trouble free service.

WARRANTY CLAIMS and INQUIRIES

The HEIL Warranty is included in the back of this manual. Should a warranty failure occur on equipment purchased from HEIL or a distributor, contact the distributor for warranty repair. All warranty repairs are to be done by the distributor or service center.

For all parts, claims or inquiries, refer to the model and serial number on the serial plate. This unit has three serial plates. See below for locations of these plates.

LIFT SERIAL PLATE LOCATED ON SIDE OF LIFT



BODY SERIAL PLATE LOCATED STREETSIDE ON FRONT HEAD

IMPORTANT!

A DANGER

IF INCORRECTLY USED, THIS EQUIPMENT CAN CAUSE SEVERE INJURY. THOSE WHO USE AND MAINTAIN THE EQUIPMENT SHOULD BE TRAINED IN ITS PROPER USE. WARNED OF ITS DANGERS, AND SHOULD READ ENTIRE MANUAL BEFORE ATTEMPTING TO SET UP, OPERATE, ADJUST OR SERVICE THE EQUIPMENT. KEEP THIS MANUAL FOR FUTURE REFERENCE.



Before starting the engine, study this Operator's Manual. Readall safety messages and decals on the unit.

Clear the area of other persons.

Learn and practice safe use of controls before operating.

It is your responsibility to understand and follow manufacturer's instructions on equipment operation and to observe pertinent laws and regulations.

SAFETY MESSAGES



THIS SAFETY ALERT SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE THE MESSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY OR DEATH.



OPERATION AND MAINTENANCE



Do not operate or service this machine until you have read and understood this manual supplied with this equipment. When operating, be certain that all individuals are clear and be ready to stop and/or reverse the operation.



MODIFICATION OR RECONSTRUCTION



It is the responsibility of any person reconstructing or modifying this equipment to do so in accordance with the appropriate sections of the ANSI Z245.1 safety standard and to furnish instructions and safety precautions associated with the reconstruction or modification of the unit.

ACAUTION

ACAUTION

Disengage PTO or "Pump Switch" when refuse unit is not in use, being repaired or work upon or when traveling

ACAUTION

When unit is in transit to and from route, landfill, etc.; operate the vehicle from the normal driver's side.

ACAUTION

Be sure all individuals are clear of any moving parts, mechanisms or components of the unit before actuating controls. During any such operation, be attentive at all times and be ready to stop or reverse the function.

ACAUTION

Wear the proper safety equipment. Obtain additional safety equipment when your safety is in doubt. Hard hats, safety shoes, protective eye wear, reflective clothing and gloves may be required. Inquire from the owner/operator on any additional safety equipment.

ACAUTION

Check that all lights are functioning properly at all times.

ACAUTION

In all cases, when unit is stored or not in use, all cylinders must be in the collapsed position, the PTO disengaged or pump switch is "OFF". Key should be removed from ignition to prevent tampering by unauthorized persons.

ACAUTION

Carry and maintain a fire extinguisher and first aid kit at all times. Know how to use them both.

AWARNING

HEIL requires a battery disconnect switch on all vehicles mounted with HEIL refuse equipment. Contact your HEIL Distributor or HEIL directly if vehicle is not so equipped.

ACAUTION

At all times, clean and replace all safety decals if they are missing or cannot be read. Decals should be obtained from your Heil Distributor or The Heil Co.

ACAUTION

Whenever you are working on or about hydraulic lines or components, wear proper eye protection and avoid contact with oil if possible. Never check for oil leaks with your hands.



AWARNING

Stay clear at all times when the container is in motion — on or off the ground.

AWARNING

Do not operate or service this machine until you have been fully trained and have read and understood the entire operation and maintenance manual supplied with this equipment. Manuals may be obtained from a Heil distributor.

DANGER

Never enter between a raised body and chassis frame as it may descend and cause injury or death. Read and understand the instructions on page 18 before proceeding.

A DANGER

A DANGER

Operating this unit under the influence of alcohol or drugs could result in personal injury or death!

A DANGER

DO NOT enter under the chassis unless the unit is in LOCK-OUT. To place unit in LOCK-OUT, stop the engine, set the brakes and make sure the brakes are holding and working properly, chock all wheels, remove the keys from the cab and insert a LOCK-OUT tag on the steering wheel.

A DANGER

Visually check the machine and run it through several cycles to find leaks, broken, missing or malfunctioning parts. If such deficient condition exists, immediately stop work on the machine and advise the appropriate person. A part failure during operating can cause damage to the unit, injury or death.

A DANGER

Before entering the body area, place the unit in LOCK-OUT. To place unit in LOCK-OUT, stop the engine, set the brakes and make sure the brakes are holding and working properly, chock all wheels, remove the keys from the cab and insert a LOCK-OUT tag onto steering wheel.



LOOK UP AND LIVE. Make sure there is enough clearance between a raised container and overhead power lines. It is not necessary for the unit or container to be in contact with the electric cable for the electricity to go through the unit. If unit does come in contact with a power line, stay in the cab and KEEP AWAY FROM THE METAL PARTS OF THE UNIT.

Voltage of Electric Cables	Minimum Amout of Clearance from the Electric Cables When the Unit is Working	Minimum Amount of Clearance from the Electric Cables When You Drive the Unit Between Jobs 4 feet (1.2 m)	
50,000 volts or less	10 feet (3 m)		
Over 50,000 volts	10 feet (3 m) plus 1/2 inch	10 feet (3 m)	
345,000 - 750,000 volts	(10 mm) for every 1,000 volts over 50,000 volts	16 feet (5 m)	

NOTE: If local rules and laws require more clearances, you must follow them.

A DANGER

Know the clearance of all overhead obstructions, viaducts, bridges, etc., as the unit is approximately 12' 6" in height with the lift assembly in the retracted and down position. See decal in chassis cab for this units overall height. NEVER drive under any overhead obstruction with the lift assembly in the extended and "up" position as unit may be too high and/or wide. Any chassis suspension modification may alter the height. Check height after any such work has been performed. Fallure to do so may result in unit damage, personal injury or death.

A DANGER

Stay clear when the lift is in motion. Do not stand under or cross under a raised lift as personal injury or death may occur.



Never operate this unit unless you are fully knowledgeable of all control functions and all persons are sufficiently clear of the unit so as to avoid injury or death.

♠ DANGER

Stand clear when tallgate is in motion and during unloading cycle. Do not stand under or cross under raised tailgate. Failure to do so may result in injury or death.

A DANGER

Be sure rear of unit is clear of all individuals or obstructions. Failure to do so may result in property damage, injury or death.

A DANGER

The top hopper opening should not be used as an entrance or exit to the body as it may result in personal injury or death. Enter body through the tailgate opening ONLY after tailgate props are used and unit has been placed in LOCK-OUT. To place unit in LOCK-OUT, stop the engine, set the brakes and make sure the brakes are holding and working properly, chock all wheels, remove the keys from the cab and insert a LOCK-OUT tag onto the steering wheel.

212-2203



A DANGER

Always raise taligate before raising body to prevent bumper from hitting ground. Failure to do so may result in unit damage, personal injury, or death.

212-1626

SAFETY INSTRUCTIONS
THE VEHICLE IS
COUPPED WITH A BACK UP
ALARM WHEN BACKHON, THE
ALARM
MUST SOUND

212-1918

OPERATOR IS RESPONSIBLE FOR THE SAFE USE OF

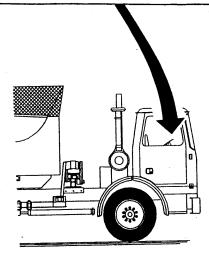
THIS VEHICLE



212-1104



212-0735



AWARNING

THE BATTERY DISCONNECT SWITCH MUST BE TURNED OFF WHENEVER THE VEHICLE IS NOT IN SERVICE AND/OR TO BE LEFT UNATTENDED!

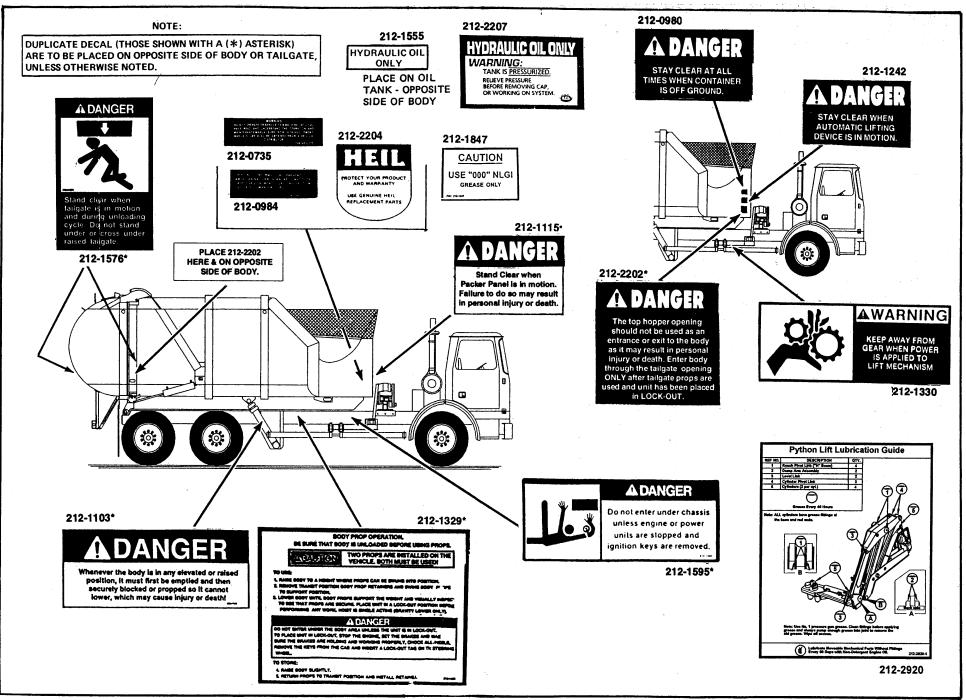
Battery Cables must be securely anchored and not rubbing other equipment. Cable insulation must be free of damage and abrasion. Inspect weekly.

212-2875

212-2875

Place on battery box closet to disconnect switch

CP PYTHON DECAL INSTALLATION KIT 212-2887



IMPORTANT: Install new decals if old decals are destroyed, lost, painted over or cannot be read. When parts are replaced that have decals, be sure to install a new decal (see above or parts manual for part numbers) with each new part. New decals are available from your HEIL distributor or write to the Heil Co., 45th St. and Valley Head Road, Ft. Payne, AL 35967.

BODY NOMENCLATURE

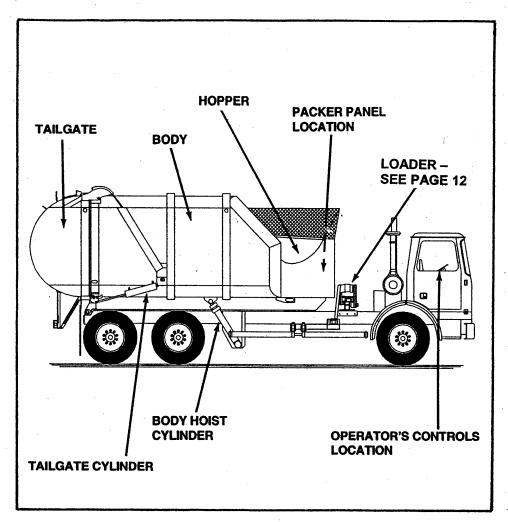


Figure 1.

LOADER NOMENCLATURE

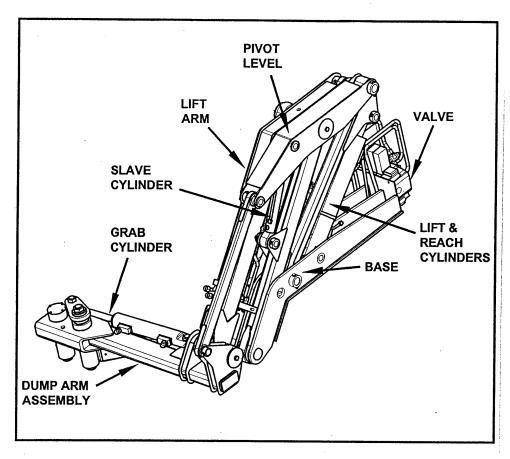


Figure 2.

BEFORE OPERATING - DAILY UNIT INSPECTION

Every day before starting your unit, have a walk-around inspection to check the following:

- 1. Make sure all safety decals are in place and readable. Replace any damaged or missing decals. Refer to decal placement chart.
- 2. Not Applicable on some Heil units, check side door for closing/latching
- 3. Check for fluid leaks from hose fittings, cylinders, valves and pumps. Check for worn or damaged hoses.
- 4. Inspect body mounting brackets for cracked welds, loose bolts or movement. Do not operate a unit with loose bolts or damaged mounting brackets.
- 5. Check body for any worn parts or visible welds for cracks.
- 6. Check function of back-up alarm and light.
- 7. A. Check throttle advance/limit for proper operation and functions. B. Check starter interlock to make sure truck will not start in gear and check neutral interlock to make sure throttle advance functions only in neutral.
- 8. Check unit for loose or missing bolts.
- Check hydraulic oil fluid level to be sure it is full. Add recommended oil if necessary.
- 10. Check chassis tires for condition and pressures. Check engine oil, water and transmission levels. Close air tank drain valve. With parking brake on, turn on battery disconnect switch and start engine.
- 11. Check all lights for functioning. Immediately replace any burned out or missing bulbs. Check any wiring and battery cables from battery box to engine starter for any loose cables, rubbing or damaged insulation.. Be sure Battery Disconnect Switch is turned "off" when truck is not in operation.
- 12. With all individuals and any hazards clear of the area,
 - A. Operate the controls to be sure all body, packer and tailgate functions are operating properly.
 - B. Unlatch and raise tailgate slightly to be sure alarm is sounding. Close tailgate and make sure it's sealed and latched.

A DANGER

DO NOT operate a unit that is in need of service or repair. A part failure during operation can cause damage to unit, personal injury or death!

SECTION 1 BEFORE ROUTE INSPECTION

A DANGER

Visually check the machine and run it through several cycles to find leaks, broken, missing or malfunctioning parts. If such deficient condition exists, immediately stop work on the machine and advise the appropriate person. A part failure during operating can cause damage to the unit, injury or death.

Each day before starting a route, check the following:

1. HYDRAULIC OIL TANK

The oil tank should be filled to the full level as indicated on the sight gauge, see figure 3, with the unit in the following position.

- A. Truck on level ground.
- B. Tailgate fully down and locked.
- C. Body fully down.
- D. Lift in the "In-Transit" position
 - 1. Reach cylinder retracted.
 - 2. Lift cylinder lowered.
 - 3. Grabbers open and against body.

2. OPERATE FUNCTIONS THROUGH CYCLES

Operate the packing, tailgate, body and lift functions through 2 or 3 cycles each. Put unit back in the "at rest" position (see above) and recheck the oil level.

ACAUTION

Before operating controls, see Section 2 for proper instructions.

ACAUTION

Be sure all individuals are clear of any moving parts, mechanisms or components of the unit before actuating controls. During any such operation, be attentive at all times and be ready to stop or reverse the function.

ACAUTION

Check that all lights are functioning properly at all times.

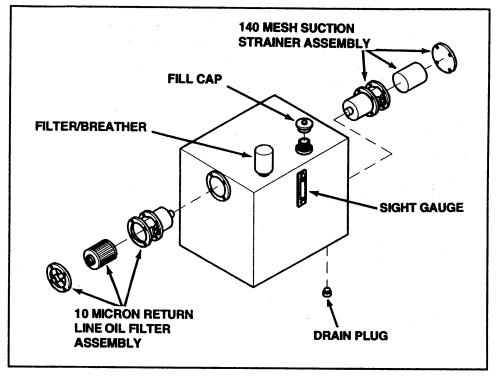


Figure 3. Hydraulic Oil Tank.

IMPORTANT: Contamination is the worst enemy of any hydraulic system. Keep dirt from entering the system. Clean around any system component before disconnecting or removing it. When filling the reservoir, filter the oil through a 200 mesh (or finer) screen. Never use a cloth to filter the oil.

The following oils by brand name are approved for use in the hydraulic system on this equipment and considered to be all temperature hydraulic fluids.

Pennzoil Pennzbell AWX MV 32 Mobil DTE 13M Shell Tellus T 32 Texaco Rando HDZ 32

NOTE: Cold weather operation requires special oil considerations. Viscosity should not exceed 7500 SSU at lowest startup temperature. Continuous operation should range between 40-1000 SSU for all temperature ranges.

Figure 4. Hydraulic Oil Recommendation.

3. ACCESS TO BODY OR HOPPER

Whenever access to the body or hopper area is required, follow these procedures.

A. TAILGATE PROPS

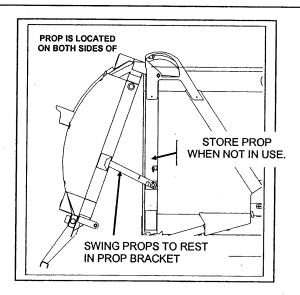
Whenever the tailgate is opened for service or maintenance, it must be propped, using the two props on the unit. **BOTH PROPS MUST BE USED.**

- 1. Set unit on flat stable surface and apply the parking brake.
- 2. Make sure area around tailgate is clear of all people.
- 3. Unlock and raise the tailgate enough to lower the prop supports. Use rocker switch in the cab.
- Rotate supports so they rest against the prop brackets.
- 5. Turn off engine and place unit in a lockout position.

When completed with service, be sure props are stored in there proper position and tailgate lowered and locked.



Stand clear when tailgate is in motion and during unloading cycle. Do not stand under or cross under a raised tailgate.



2. TO STORE PROPS

A. Raise tailgate slightly and rotate props to stored position and replace pin through prop.

B. BUILD A TAILGATE PROP

Whenever the tailgate is opened for service or extended maintenance, it must be propped. Follow the procedures as listed.

1. BUILDING A PROP

Build a prop per specifications in figure 5.

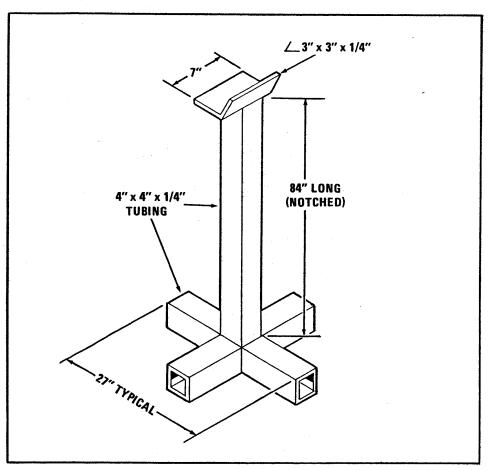


Figure 5. Tailgate Prop.

2. PROPPING THE TAILGATE

- 1. Set unit on flat stable surface and apply the parking brake.
- 2. Unlock and raise the tailgate.
- 3. Locate the prop in the center of the tailgate.
- 4. Slowly lower the tailgate to rest on prop, see figure 7.
- 5. Turn off engine and remove ignition key and place unit in LOCK-OUT.

A DANGER

Stand clear when tailgate is in motion and during unloading cycle. Do not stand under or cross under raised tailgate. Failure to do so may result in injury or death.

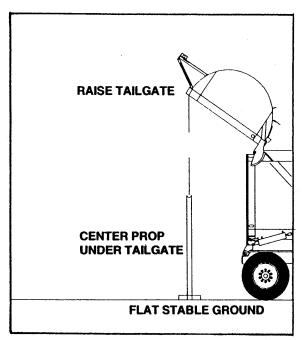


Figure 6.

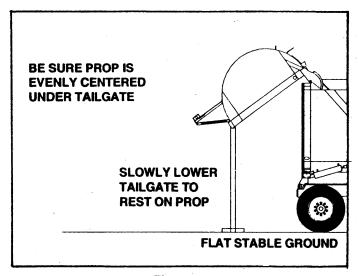


Figure 7.

4. BODY PROPS

Body props are supplied with the unit and are located on both sides of the unit.

IMPORTANT: Empty body of all refuse before using body props.

- **A. To lower props -** partially raise the body and rotate the prop down, both sides of the unit. Lower the body so props mate with their rest points and all of load is removed from the body raise cylinders, see figure 8.
- **B. To store props -** partially raise the body, return props (both sides of unit), to the transit position.

Be sure body is unloaded before using body props.

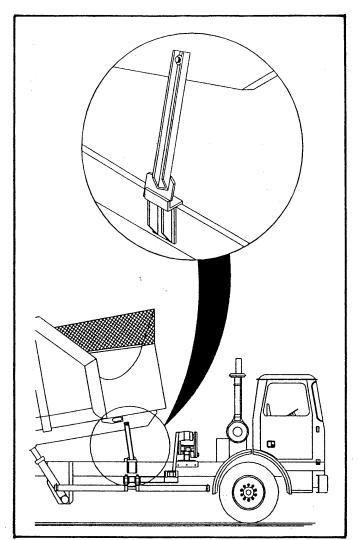


Figure 8.

Be sure body is unloaded before using body props.

5. ALTERNATE BODY BLOCKING

In the event the body is in a position in which the factory props CANNOT be used, an alternative method for blocking is shown in the figure below. Be sure timbers are securely braced against body crossmembers.

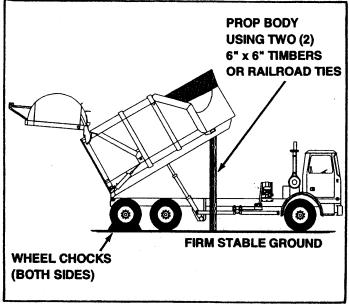


Figure 9.

DANGER

Whenever the body is in any elevated or raised position, it must be securely propped or blocked so it can not fall on anyone. Failure to do so may result in injury or death.

IMPORTANT

IF PROPER EQUIPMENT IS NOT AVAILABLE OR IF YOU ARE INEXPERIENCED IN PERFORMING THE ABOVE, DO NOT ATTEMPT REPAIRS. GET EXPERIENCED HELP AND PROPER EQUIPMENT BEFORE PROCEEDING.

6. LOWERING RAISED BODY WHEN THE IN-CAB OPERATING CONTROLS BECOME INOPERATIVE OR IF RAISED BODY WILL NOT LOWER FOR ANY OTHER REASON.

A DANGER

Never enter between a raised body and chassis frame as it may descend and cause injury or death. Read and understand the following instructions before proceeding.

IMPORTANT! Body props must be in the lowered position before starting this procedure!

- 1. Make sure all persons are cleared at least 30' away from the vehicle to avoid potential injury or death while performing the following steps, unless otherwise indicated herein.
- Set vehicle parking brake and chock or block wheels securely so the vehicle cannot move.
- 3. Either allow the load to finish dumping, or if part of load is stuck in body, use a backhoe or front end loader to remove balance of load. **NOTE! Use** extreme caution not to overturn vehicle.
- 4. Block the raised body with two (2) 6" x 6" timbers of sufficient length or railroad ties as shown in Figure 10 to support the body (and load if unable to remove load).
- Connect a chain or cable sling to an overhead crane, truck crane or other lifting device having adequate capacity to safely hold and lower the body and load.
- Attach the chain or cable device with hooks, all of adequate lift rating, to the body rubrail just behind the front crossmember as shown. Snug up the tension on the sling with the crane, without relieving the pressure from the body supporting timbers.
- 7. With the chocking and timber blocking still in place, <u>from a position on the ground</u>, <u>under the chassis frame</u>, shift the control valve, at the valve location into the "lower" position. If the valve is spring centered, wire or lock the valve in the "lower" position.
- 8. To prevent injury or death, move out from under the truck chassis and clear all people from the area where the raised body could potentially overturn. Use the crane mechanism to slightly raise the body to relieve the pressure from the body supporting timbers. Be sure the crane lifting device is securely attached to the body and both the crane and body are stable before removing the body supporting timbers.

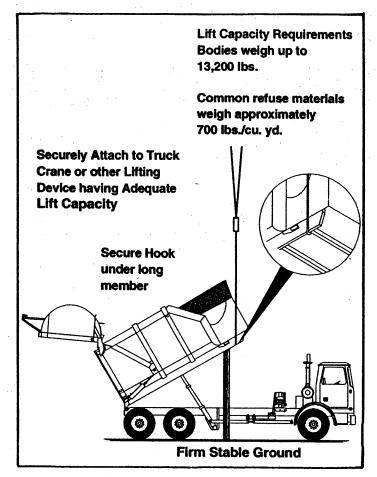


Figure 10.

Remove body supporting timbers, being sure not to place your body or limb between the unit body and chassis frame.

- 9. Using the crane, slowly lower the body in a controlled manner until it is resting on the chassis frame.
- 10. Proceed to perform the repairs and/or replacement necessary to correct the control mechanism failure, or other malfunction, by qualified and trained personnel, such as your authorized Heil distributor.

IF PROPER EQUIPMENT IS NOT AVAILABLE OR IF YOU ARE INEXPERIENCED IN PERFORMING THE ABOVE, DO NOT ATTEMPT TO LOWER THE BODY OR ATTEMPT REPAIRS. IN EITHER CASE, GET EXPERIENCED HELP AND PROPER EQUIPMENT BEFORE PROCEEDING. IF YOU SHOULD HAVE ANY QUESTIONS CONCERNING ANYTHING CONTAINED IN THESE INSTRUCTIONS, PLEASE CONTACT HEIL TECHNICAL SUPPORT DEPT. (800) 251-7258.

7. TRAVELING OR "IN-TRANSIT" POSITION

When traveling to and from landfill or back to route, be sure unit is the traveling or In-Transit position as follows:

- A. Tailgate and Body down and locked.
- B. E-Stop Switch is OFF.
- C. Lift Lift and Reach cylinders in retracted and lowered position and grabbers open and tight against the chassis.
- D. Packer Paddle;
 - Empty unit idle position.
 - Full unit up tight against refuse
- E. Mirrors are properly adjusted.
- F. Lights are all functioning.
- G. Streetside Driver's Station is used for traveling.
- H. Hopper Cover (Optional) is closed.

A DANGER

Know the clearance of all overhead obstructions, viaducts, bridges, etc., as the unit is approximately 12' 6" in height with the lift assembly in the retracted and down position. See decal in chassis cab for this units overall height. NEVER drive under any overhead obstruction with the lift assembly in the extended and "up" position as unit may be too high and/or wide. Any chassis suspension modification may alter the height. Check height after any such work has been performed. Fallure to do so may result in unit damage, personal injury or death.

A DANGER

Operating this unit under the influence of alcohol or drugs could result in property damage, injury or death.

TRAVELING OR "IN-TRANSIT" POSITION

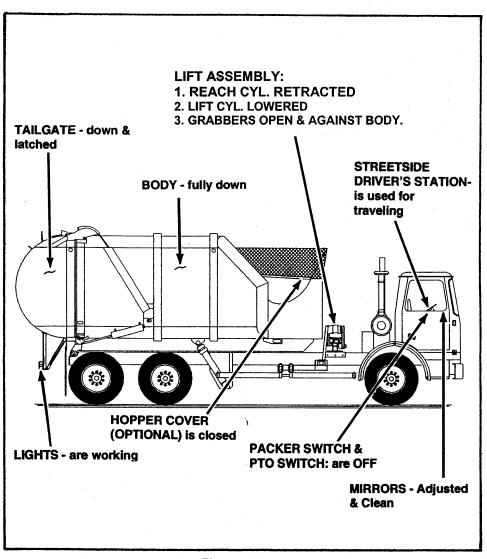


Figure 11.

SECTION 2 CAB CONTROLS AND LIGHTS

The following lights and switches are located in the control box in the chassis cab and are identified as follows:



Never operate this unit unless you are fully knowledgeable of all control functions and all persons are sufficiently clear of the unit so as to avoid injury or death.

A. LIGHTS

- **1. PUMP (SYSTEM) ON LIGHT (Red)** a red light that illuminates to indicate the pump that activates the hydraulic system is ON.
- **2. PACKER PADDLE LIGHT (Green) -** two green lights that illuminate to indicate in which direction the packer paddle is moving either left or right.
- **3. BODY FULL LIGHT (Red) -** a red light that illuminates to indicate the body is full of refuse and unit needs to be emptied.

NOTE: An alarm will sound when the body is full and needs to be emptied.

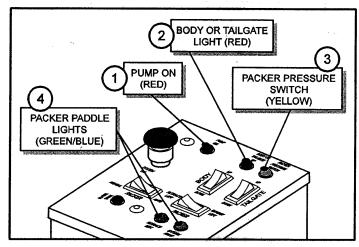


Figure 12. Lights.

B. ROCKER SWITCHES

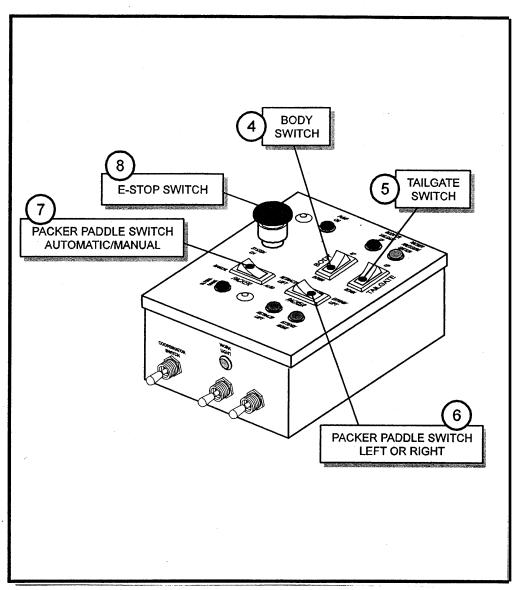


Figure 13. Switches.

B. ROCKER SWITCHES

4. BODY SWITCH - a rocker switch that controls the up and down movement of the body.

NOTE: An alarm will sound to indicate the body is raised off the chassis. Alarm will go off when body is down on chassis.

5. TAILGATE SWITCH - a rocker switch that controls the up and down movement of the tailgate.

NOTE: An alarm will sound to indicate the tailgate is not full closed and locked. The alarm will go off when the tailgate is closed and locked.

- **6. PACKER PADDLE SWITCH LEFT OR RIGHT -** a rocker switch that controls the direction movement of the paddle. Set switch to left and the paddle will move in the left direction only in clearing the hopper. Set switch to right and the paddle will move in the right direction only in clearing the hopper.
- 7. PACKER PADDLE SWITCH AUTOMATIC OR MANUAL a rocker switch that controls the mode the paddle is in.
- 1. Automatic mode paddle will swing in direction and when it reach full swing, will automatically reverse direction and swing the other way.
- 2. Manual mode paddle needs to be moved using the paddle switch (see item 3).
- 8. Pump E-Stop Switch (red) this switch turns the pump ON.

C. TWO-POSITION TOGGLE SWITCHES

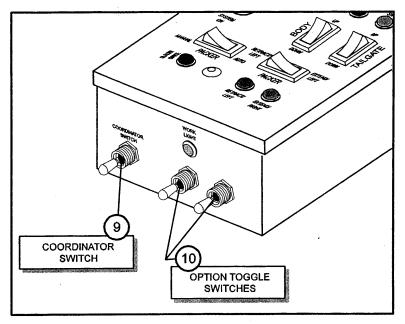
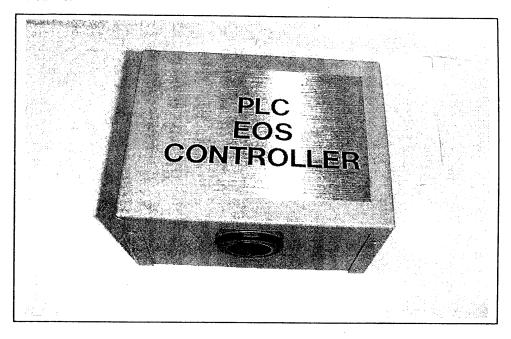


Figure 14.

- **9. COORDINATOR TOGGLE SWITCH** a toggle switch that operates the loader lift functions in different modes.
- **A. Switch** enables grabber close, retract and lift raise by depressing grabber close push button on joystick.
- **10. OPTIONAL TOGGLE SWITCHES** for use as optional work, strobe or beacon lights.

MINI PLC

A mini PLC box is located in the cab and controls several loader and packer functions.



Shown below are the flashing light codes to indicate something is not operating properly. Example is if the flashing LED is 10.06, it indicates the body and/or tailgate is raised. Refer to EOS Controller Information book in the maintenance section of the parts manual for more details.

PLC, EOS CONTROLS						
DIAGNOSTIC						
FLASHING LAMP CODE						
FLASHING LED	INPUT SIGNAL DESCRIPTION					
10.00	(0.00) TACH SIGNAL NOT DETECTED.					
10.02	(0.04) HIGH TRANS TEMP SIGNAL DETECTED.					
10.04	(0.01) NEUTRAL SIGNAL NOT DETECTED.					
10.06	(0.05) BODY/TAILGATE SIGNAL DETECTED.					

NOTES/COMMENTS						
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		,				
		7				

E. FUSES and CIRCUIT BREAKER

The following fuses and circuit breaker are located inside the control box which is located in the chassis cab.

1. There are three (3) 6 amp fuses and one (1) 20 amp circuit breaker located inside of the control box. If the fuses need to be replaced often or the circuit breaker "trips" often, an electrical problem may exist. Refer to the electrical schematics in the parts manual to troubleshoot the problem.

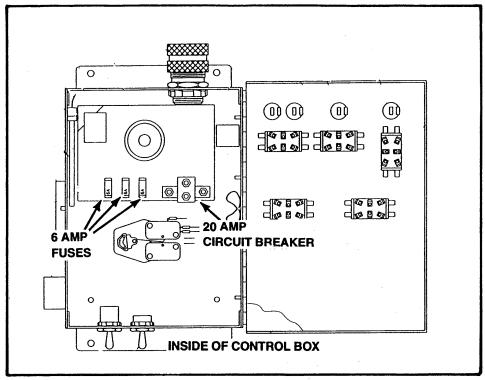


Figure 16.

F. HOPPER COVER - (OPTIONAL)

A manually operated hopper cover is located at the front of the hopper. Be sure cover is open before starting route. Always close cover when traveling to eliminate refuse from "flying" out of the hopper.

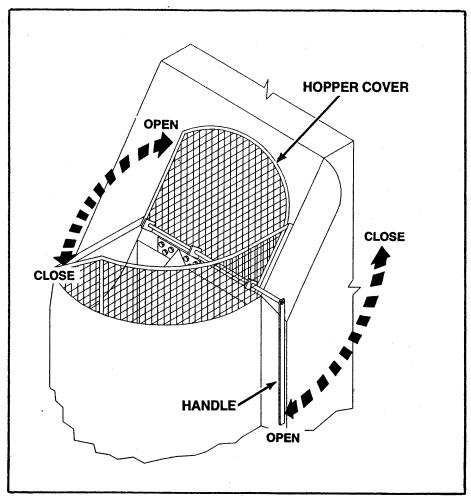


Figure 17. Hopper Cover & Handle.



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SECTION 3

ON ROUTE OPERATION PROCEDURE

1. TRAVELING OR "IN-TRANSIT" POSITION

When traveling to and from landfill or back to route, be sure unit is the traveling or In-Transit position as follows;

- A. Tailgate and Body down and locked.
- B. **E-Stop Switch** is OFF.
- C. Lift Lift and Reach cylinders in retracted and lowered position and grabbers open and tight against the chassis.
- D. Packer Paddle:

Empty unit – idle position.

Full unit - up tight against refuse

- E. Mirrors are properly adjusted.
- F. Lights are all functioning.
- G. Streetside Driver's Station is used for traveling.
- H. Hopper Cover (Optional) is closed.

ACAUTION

When unit is in transit to and from route, landfill, etc.; operate the vehicle from the normal driver's side.

After arriving on the route the following operational procedures should be followed.

2. USE OF CURB SIDE DRIVE (for chassis equipped with dual drive station)

Drive the chassis from the curb side drivers station, only on the collection route. This station should not be used during transit to and from route, landfill, etc.

AWARNING

Be sure all individuals are clear of any moving parts, mechanisms or components of the unit before actuating controls. During any such operation, be attentive at all times and be ready to stop or reverse the function.

3. ENGAGE THE SYSTEM (PUMP) SWITCH

The E-Stop system switch (located in cab) and the Joystick pump switch both need to be ON.

4. PACKING PADDLE

The packing paddle provides for constant sweeping of the hopper as it moves left to right and right to left. The paddle may be set to pack in one direction only by moving the rocker switch to the manual mode. Paddle can be stop by setting Rocker switch in the "manual" position.

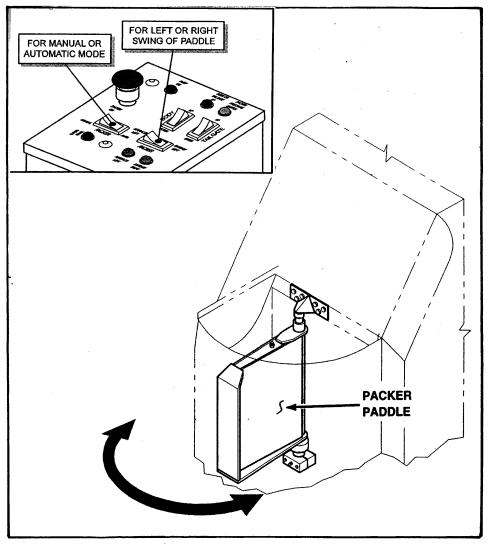


Figure 18. Paddle Left/Right.

5. LIFT CONTROL

The lift is designed to pick up refuse containers and dump them into the hopper.

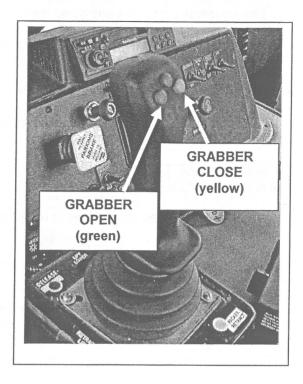
The joystick control for the lift is located in the cab (optional toggle switches under the right hand seat) in easy reach of the operator.

JOYSTICK MOVEMENTS

- LIFT RAISE pull and hold joystick to raise the lift. Release joystick stops the movement of the lift.
- LIFT LOWER push and hold joystick forward to lower the lift. Release joystick stops the movement of the lift.
- LIFT RETRACT move joystick to the left and hold to retract the lift. Release joystick stops movement of the lift.
- 4. **LIFT EXTEND** move joystick to the right and hold to extend the lift. Release joystick stops movement of the lift.
- DUMP pull joystick rearward and to the left and hold for lift to retract and raise up to dump the container. Release the joystick to stop movement of the lift.



B. GRIP CLOSE/OPEN – controls the closing and opening of the grabbers.



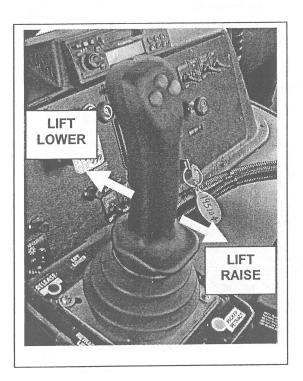
- A. **GRABBER OPEN GREEN** depress button and hold, when the grabbers get to the desired open position, release the button.
- B. **GRABBER CLOSE YELLOW** depress and hold button until grabbers are fully closed around the container. Release button.

AWARNING

Be sure all individuals are clear of any moving parts, mechanisms or components of the unit before actuating controls. During any such operation, be attentive at all times and be ready to stop or reverse the function.



B. LIFT RAISE – pull and hold joystick to raise the lift. Release joystick stops the lift movement.



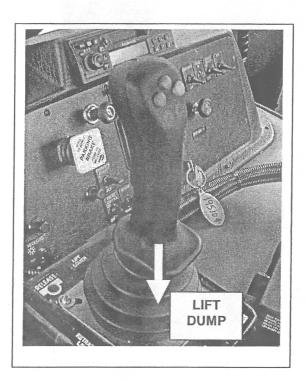
C. LIFT LOWER - push and hold joystick forward to lower the lift. Release joystick to stop lift movement.

AWARNING

Stay clear at all times when the container is being loaded,



D. DUMP – pull joystick rearward and to the left and hold for the lift to raise up to dump the container. Release joystick stops the lift movement.



AWARNING

Stay clear at all times when the container is being loaded, Unloaded or off the ground.



A DANGER

LOOK UP AND LIVE. Make sure there is enough clearance between a raised container and overhead power lines. It is not necessary for the unit or container to be in contact with the electric cable for the electricity to go through the unit. If unit does come in contact with a power line, stay in the cab and KEEP AWAY FROM THE METAL PARTS OF THE UNIT. SEE CHART BELOW.

Voltage of Electric Cables	Minimum Amout of Clearance from the Electric Cables When the Unit is Working	Minimum Amount of Clearance from the Electric Cables When You Drive the Unit Between Jobs
50,000 volts or less	10 feet (3 m)	4 feet (1.2 m)
Over 50,000 volts	10 feet (3 m) plus 1/2 inch (10 mm) for every 1,000 volts over 50,000 volts	10 feet (3 m)
345.000 - 750,000 volts		16 feet (5 m)

NOTE: If local rules and laws require more clearances, you must follow them.

6. PACK - ON - THE MOVE

The packing paddle can be operated while the vehicle is moving as well as stationary.

- A. Packing while stationary Brakes applied and holding.
- B. Packing on the move transmission in gear and vehicle moving.

ACAUTION

Pay attention to driving and do not pack-on-the move when unit is in congested traffic or travellng at a speed in excess of 10 MPH or 1800 RPM.

7. LEAVING THE ROUTE FOR THE LANDFILL

When traveling to and from landfill or back to route, be sure unit is the traveling or In-Transit position as follows:

- A. Tailgate and Body down and locked.
- B. E-Stop Switch is OFF.
- C. Lift Lift and Reach cylinders in retracted and lowered position and grabbers open and tight against the chassis.
- D. Packer Paddle; Empty unit – idle position. Full unit – up tight against refuse
- E. Mirrors are properly adjusted.
- F. Lights are all functioning.
- G. Streetside Driver's Station is used for traveling.
- H. Hopper Cover (Optional) is closed.

SECTION 4 LANDFILL PROCEDURES

1. SET UP OF UNIT

After positioning the unit on firm ground for dumping in the landfill, set it up as follows:

- A. Shift transmission to "Neutral".
- B. Apply the parking brake and make sure it is holding.
- C. The E-Stop system switch (located in cab) and the Joystick pump switch both need to be ON.

A DANGER

Be sure rear of unit is clear of all individuals or obstructions. Failure to do so may result in property damage, injury or death.

2. RAISE THE TAILGATE

To raise the tailgate, move rocker switch to "up" position and hold until the tailgate is completely raised. Always raise the tailgate before raising body.

IMPORTANT: The packer paddle switch must be in the **manual** mode for the tailgate switch to operate.

NOTE: An alarm will sound to indicate the tailgate is unlocked and raised.

To ease dumping, cycle the packer paddle several times with the tailgate open. This will help clear the hopper and loosen the load.

A DANGER

Stand clear when tailgate is in motion and during unloading cycle. Do not stand under or cross under raised tailgate. Failure to do so may result in injury or death.

RAISE/LOWER TAILGATE

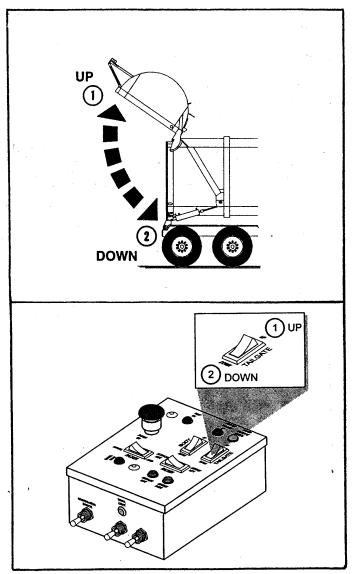


Figure 23. Raise/Lower Tailgate.

3. RAISE THE BODY

To raise the body, move body rocker switch to "up" position and hold until the body is completely raised (approx. 30°).

NOTE: An alarm will sound to indicate the body is raised off of chassis.



Stand clear when body is raised or unloading. Failure to do so may result in injury or death.

ACAUTION

Before raising the body, be sure the dump area is free of all personnel. During any such operation, be attentive at all times and be ready to stop or reverse the function.

4. EMPTYING THE BODY

As load is coming out of body, move the vehicle a short distance to empty the entire load.

5. LOWER THE BODY

IMPORTANT

If the body WILL NOT lower because of inoperative cab controls or for any other reason, see instructions on "How to Lower Body" on page 45.

ALWAYS lower the body before lowering the tailgate. If body props were used, make sure they are in the stored position before attempting to lower the body.

Be sure all individuals are clear of any moving parts, mechanisms or components of the unit before actuating controls. During any such operation, be attentive at all times and be ready to stop or reverse the function.

To lower the body, move body rocker switch to "down" position.

NOTE: Alarm will stop when the tailgate is fully down and locked and the body is fully down.

RAISE/LOWER BODY

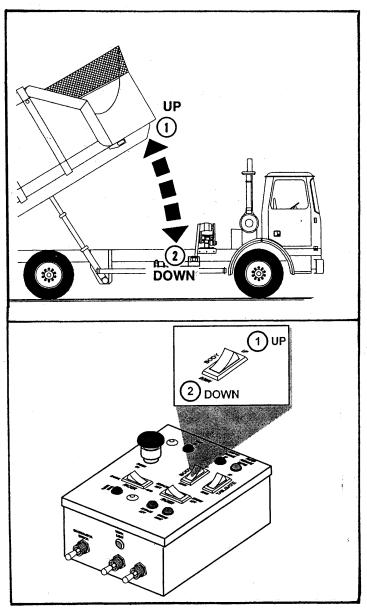


Figure 24. Raise/Lower Body.

6. LOWER THE TAILGATE

AWARNING

Be sure all individuals are clear of any moving parts, mechanisms or components of the unit before actuating controls. During any such operation, be attentive at all times and be ready to stop or reverse the function.

A DANGER

Stand clear when tailgate is in motion and during unloading cycle. Do not stand under or cross under raised tailgate. Failure to do so may result in injury or death.

To lower the tailgate, move rocker switch to "down" position.

NOTE: Alarm will stop when the tailgate is fully down and locked and the body is fully down.

7. PREPARE TO RETURN TO ROUTE

When traveling to and from landfill or back to route, be sure unit is the traveling or In-Transit position as follows;

- A. Tailgate and Body down and locked.
- B. E-Stop Switch is OFF.
- C. Lift Lift and Reach cylinders in retracted and lowered position and grabbers open and tight against the chassis.
- D. Packer Paddle;
 - Empty unit idle position.
 - Full unit up tight against refuse
- E. Mirrors are properly adjusted.
- F. **Lights** are all functioning.
- G. Streetside Driver's Station is used for traveling.
- H. Hopper Cover (Optional) is closed.

END OF ROUTE (DAY) UNIT SHUT-DOWN

Every day at the end of the route (day), set the unit in the following position:

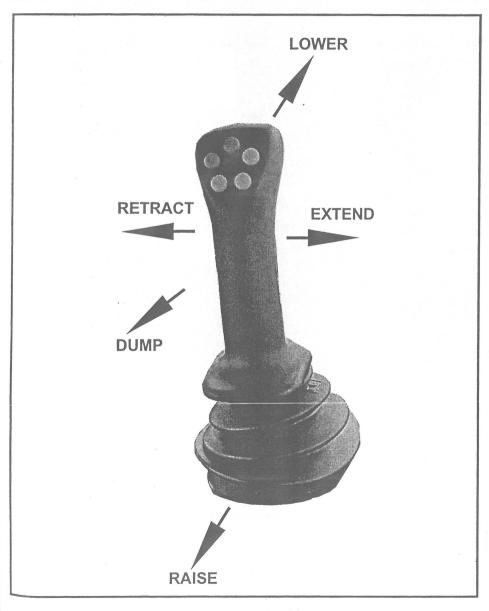
- 1. Check for fluid leaks from hose fittings, cylinders, valves and pumps. Check for worn or damaged hoses.
- 2. Turn off all lights and switches.
- 3. Set unit Parking Brake.
- 4. Make sure all cylinders are in the collapsed position, if possible.
- 5. Turn ignition switch off and place unit in lock-out position.
- 6. Turn Battery Disconnect Switch off.
- 7. Open air tank drain valve.

PYTHON LIFT JOYSTICK CONTROL IDENTIFICATION

The joystick controls all the lift functions and has 3 push buttons to control the grabbers and pump. They are identified as follows.

1. JOYSTICK MOVEMENTS

The joystick can be moved forward, backward, sideways and at an angle for the different functions. See below for the different movement and the functions they control.

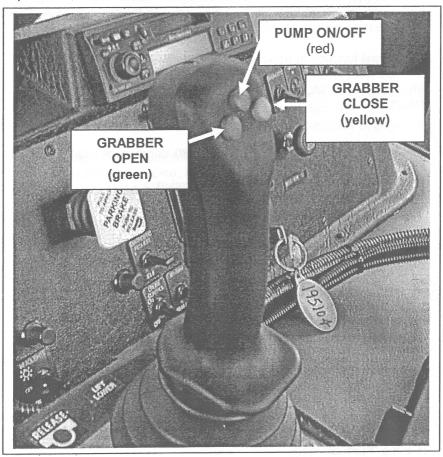


JOYSTICK MOVEMENTS

- 1. **LIFT RAISE** pull and hold joystick to raise the lift. Release joystick stops the movement of the lift.
- 2. **LIFT LOWER** push and hold joystick forward to lower the lift. Release joystick stops the movement of the lift.
- 3. **LIFT RETRACT** move joystick to the left and hold to retract the lift. Release joystick stops movement of the lift.
- 4. **LIFT EXTEND** move joystick to the right and hold to extend the lift. Release joystick stops movement of the lift.
- DUMP pull joystick rearward and to the left and hold for lift to retract and raise up to dump the container. Release the joystick to stop movement of the lift.

PYTHON JOYSTICK CONTROL IDENTIFICATION

The joystick has 3 push-buttons on the handle. The green and yellow buttons control the grabber open and close functions and the third button (red) is used for Pump ON/OFF..



2. PUSH-BUTTON CONTROLS

- A. **GRABBER OPEN GREEN** depress button and hold, when the grabbers get to the desired open position, release the button.
- B. **GRABBER CLOSE YELLOW** depress and hold button until grabbers are fully closed around the container. Release button.
- C. **PUMP ON/OFF RED** depress and release to engage the hydraulic pump.

CP-Python with OIGAI High Flow Tandem Pump System For High Torque Engines

Pump System

 The pump(s) will be on only when the in-cab red emergency stop switch and pump switch on joystick are activated, and the transmission is below the high temperature set point.

Lift

- The lift will function in neutral or when foot brake is applied and the RPM is below 800, and the body and tailgate are down.
- The lift will grab, lift, lower and release in 6-8 seconds at engine idle (700 RPM).

Packer

- The packer will complete one cycle (180 degrees of rotation) in 13-15 seconds at 700 RPM.
- The packer will not pause during lift operation.
- The packer will not function above 1800 RPM.
- The packer will cycle continuously when the "auto" packer function is selected.
- The packer will function in the direction selected when in the "manual" mode and the left or right switch is held.

Warning Signals

- The arm extended light and alarm will activate if the arm is out and the foot brake is off and the transmission is in gear.
- An alarm will sound and a light will illuminate if the body or tailgate are raised.
- The backup (reverse) alarm will sound if the body or tailgate is raised or the transmission is in reverse.

Interlocks

 The tailgate and body raise functions will operate only when the packer is in the "manual" mode.

CP-Python with OIGAI Low Flow Tandem Pump System For Low Torque Engines

Pump System

 The pump(s) will be on only when the in-cab red emergency stop switch and pump switch on Joystick are activated, and the transmission is below the high temperature set point. The pump switch is located on the Joystick.

<u>Lift</u>

- The lift will function in neutral or when foot brake is applied and the RPM is below 800, and the body and tailgate are down.
- The lift will grab, lift, lower and release in 6-8 seconds at engine idle (700 RPM).
- If engine torque is not sufficient to maintain RPM during lift cycle, a pump section will be disabled, reducing torque demand and lift speed to allow completion of the lift function.

Packer

- The packer will complete one cycle (180 degrees of rotation) in 13-15 seconds at 700 RPM.
- The packer will pause during lift operation.
- The packer will not function above 1800 RPM or when the transmission is at high temperature.
- The packer will cycle continuously when the "auto" packer function is selected.
- The packer will function in the direction selected when in the "manual" mode and the left or right switch is held.

Warning Signals

- The arm extended light and alarm will activate if the arm is out and the foot brake is off and the transmission is in gear.
- An alarm will sound and a light will illuminate if the body or tailgate are raised.
- The backup (reverse) alarm will sound if the body or tailgate is raised or the transmission is in reverse.

Interlocks

• The tailgate and body raise functions will operate only when the packer is in the "manual" mode.

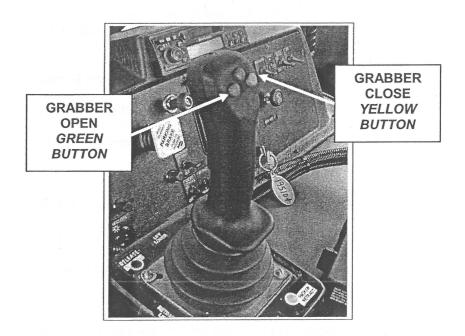
CHANGING FROM AUTOLIFT TO MANUAL LIFT

To change the lift from auto to manual mode, use the coordinator switch on the side of the control box.

The coordinated sequencing of the lift functions creates a semi-automatic lift cycle.

The grabber close push button will close the grabbers until the "grabber close time" expires. Then activate the lift retract and lift raise functions to place the lift in the dump position.

The grabber open push button will open the grabbers and activate the lift retract function (lift has to be manually lowered with joystick) to place the lift in the stowed position.



SOLID WASTE SYSTEMS WARRANTY

Heil Environmental Industries, Ltd. ("Heil") warrants its solid waste collection equipment to be free from defects in material and workmanship under normal use for a period of six (6) months from the date of equipment In-Service or during the period of coverage offered by an Extended Warranty Program, when proper service and maintenance as described in its Service bulletins and Operation Manuals are performed. The standard or extended equipment warranty is not transferable except for sales demonstration units.

This warranty is expressly limited to the repair or replacement of any component or part thereof, of any such unit manufactured by Heil that is proven to Heil's satisfaction to have been defective in material or workmanship. Such components or parts shall be repaired or replaced at Heil's option without cost to the standard purchaser for parts and labor provided such unit is returned to an authorized Heil Distributor or Heil approved service location for replacement or repair. The repair or replacement must be made during the standard or extended warranty coverage period.

Before any warranty can be allowed on new equipment, a warranty registration form must be on file with Heil's warranty department. Wear items are excluded from warranty coverage.

All OEM service parts sold by Heil have a six (6) month warranty from the date of purchase. Aftermarket parts are supported by a 90-day warranty. The parts warranty covers parts only, providing that factory inspection reveals a defect in material or workmanship. Labor, troubleshooting, etc. is not covered under the parts warranty policy.

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Other than the extension of the standard warranty period purchased under a supplemental Heil Extended Warranty Program, no employee or representative is authorized to modify this warranty in any way nor shall any other warranties be granted. However, Heil retains the right to modify its warranty program prospectively at any time.

The above warranty supercedes and is in lieu of all other warranties expressed or implied.

